इंटरनेट मानक

Disclosure to Promote the Right To Information

Whereas the Parliament of India has set out to provide a practical regime of right to information for citizens to secure access to information under the control of public authorities, in order to promote transparency and accountability in the working of every public authority, and whereas the attached publication of the Bureau of Indian Standards is of particular interest to the public, particularly disadvantaged communities and those engaged in the pursuit of education and knowledge, the attached public safety standard is made available to promote the timely dissemination of this information in an accurate manner to the public.

“जानने का अधिकार, जीने का अधिकार”
Mazdoor Kisan Shakti Sangathan
“The Right to Information, The Right to Live”

“पुराने को छोड नये के तरफ”
Jawaharlal Nehru
“Step Out From the Old to the New”

IS/ISO 9178-1 (1988): Templates for Lettering and Symbols, Part 1: General Principles and Identification Markings [PGD 22: Educational Instruments and Equipment]

“ज्ञान से एक नये भारत का निर्माण”
Satyanarayan Gangaram Pitroda
“Invent a New India Using Knowledge”

Act Number 22 of 2005
The Indian Parliament
RIGHT TO INFORMATION

Made Available By
Public.Resource.Org

“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”
Bhartṛhari—Nītiśatakam
“Knowledge is such a treasure which cannot be stolen”

BLANK PAGE

BRUTUM FULMEN

IGNORANTIA JURIS NON EXCUSAT

PROTECTED BY COPYRIGHT

भारतीय मानक

प्रतीकों और अक्षर बनाने के लिए आधार पट्टिका

भाग 1 सामान्य सिद्धान्त और पहचान निशान

Indian Standard

TEMPLATES FOR LETTERING AND SYMBOLS

PART 1 GENERAL PRINCIPLES AND IDENTIFICATION MARKINGS

ICS 01.100.40

© BIS 1996

BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

September 1996

Price Group 2

Optical and Mathematical Instruments Sectional Committee, LM 20

NATIONAL FOREWORD

This Indian Standard (Part 1) which is identical with ISO 9178-1 : 1988 'Templates for lettering and symbols — Part 1 : General principles and identification markings', issued by International Organization for Standardization (ISO) was adopted by the Bureau of Indian Standards on the recommendation of the Optical and Mathematical Instruments Sectional Committee (LM 20) and approval of Light Mechanical Engineering Division Council.

The standard is being published in following three parts:

Part 1 General principles and identification markings

Part 2 Slot widths for wood-cased pencils, clutch pencils and fine-lead pencils

Part 3 Slot widths for technical pens with tubular tips in accordance with ISO 9175-1

The text of ISO Standard has been approved as suitable for publication as Indian Standard without deviations. Certain conventions are, however, not identical to those used in Indian Standards. Attention is particularly drawn to the following:

a) Wherever the words 'International Standard' appear referring to this standard, they should be read as 'Indian Standard'.

b) Comma (,) has been used as a decimal marker while in Indian Standards the current practice is to use a point (.) as the decimal marker.

In this adopted standard, reference appears to certain International standards for which Indian Standards also exist. The corresponding Indian standards which are to be substituted in their place are listed below along with their degree of equivalence for the editions indicated:

International Standard	*Corresponding Indian Standard*	*Degree of Equivalence*
ISO 3098-1 : 1974	IS 9609 (Part 1) : 1983 Lettering on technical drawings: Part 1 English lettering (*first revision*)	Identical
ISO 9175-1 : 1988	IS..... Drawing instruments — Tubular tips for hand-held technical pens using Indian ink on tracing paper — Specification (*under preparation*)	Technically Equivalent
ISO 9178-2 : 1988	IS/ISO 9178-2 : 1988 Templates for lettering and symbols: Part 2 Slot widths for wood-cased pencils, clutch pencils and fine-lead pencils	Identical
ISO 9178-3 : 1989	IS/ISO 9178-3 : 1989 Templates for lettering and symbols: Part 3 Slot widths for technical pens with tubular tips in accordance with ISO 9175-1	Identical

Indian Standard

TEMPLATES FOR LETTERING AND SYMBOLS

PART 1 GENERAL PRINCIPLES AND IDENTIFICATION MARKINGS

0 Introduction

ISO 9178 has been drawn up to provide a universal means of communication between the various interests involved in technical drawing.

Requirements in industry vary considerably; in recognition of this fact, ISO 9178 comprises several parts:

Part 1: General principles and identification markings.

Part 2: Slot widths for wood-cased pencils, clutch pencils and fine-lead pencils.

Part 3: Slot widths for technical pens with tubular tips in accordance with ISO 9175-1.

1 Scope and field of application

ISO 9178 deals with lettering and draughting templates used to produce technical drawings.

This part of ISO 9178 specifies the form and structure of these templates independent of the material and manufacturing method so that the appropriate lettering and/or draughting instrument can be guided precisely.

It establishes identification marks, which indicate to the user the correct writing instrument(s) to be used with the template.

This part of ISO 9178 is not applicable in the case of technical drawings prepared by means of plotters.

2 References

ISO 3098-1, *Technical drawings — Lettering — Part 1: Currently used characters.*

ISO 9175-1, *Tubular tips for hand-held technical pens using India ink on tracing paper — Part 1: Definitions, dimensions, designation and marking.*

ISO 9178-2, *Templates for lettering and symbols — Part 2: Slot widths for wood-cased pencils, clutch pencils and fine-lead pencils.*

ISO 9178-3, *Templates for lettering and symbols — Part 3: Slot widths for technical pens with tubular tips in accordance with ISO 9175-1.*

3 Definitions

For the purposes of this part of ISO 9178, the following definitions apply.

3.1 template: Instrument designed to enable the direct transfer of set contours onto a surface.

NOTE — In ISO 9178 a template is understood to be a draughting aid. Qualifying terms are used to describe distinguishing features of templates, e.g. "lettering template" and "symbol (draughting) template".

3.1.1 lettering template: Template for the accurate transfer of characters.

3.1.2 symbol (draughting) template: Template for the accurate transfer of geometric figures (e.g. circles, squares) and/or graphical symbols as required for technical drawing.

4 Dimensions

The slot widths, the bevelled or perpendicular edges and the thickness of the template sheet are dependent on which lettering or draughting instruments are to be used.

It should be possible to guide these instruments easily and accurately in the slots without obstruction so that the best possible transfer of, for example, a graphical symbol is guaranteed.

The usual lettering/draughting instruments for technical drawing, i.e.

a) for pencil drawings: pencils, clutch pencils, fine-lead pencils,

b) for ink drawings: technical drawing pens, drawing ink funnel pens,

make differing demands on the template. The dimensions of the slots of templates for the different writing instruments are specified in ISO 9178-2 and ISO 9178-3.

5 Template marking

Templates shall be marked with the following indication:

a) in the case of templates for lettering, reference to the lettering designation (i.e. type of characters and type of lettering);

b) the symbol of the lettering/draughting instrument to be used;

c) the line thickness or pencil size;

d) in the case of templates for lettering, the nominal size of lettering;

e) in the case of templates for symbols, the nominal size of geometric figure, if required.

5.1 Symbol

The symbol of the lettering/draughting instrument to be used shall be marked on the template as shown in the table.

5.2 Line thickness

The line thickness of the lettering/draughting instrument to be used shall be marked on the template.

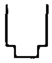
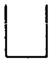
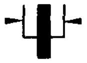
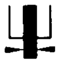
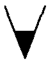
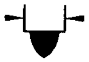
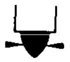
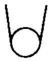
5.2.1 Fine-lead mechanical pencils

The nominal dimension of the fine-lead mechanical pencil, as specified in ISO 9178-2, shall be marked on the template.

5.2.2 Technical pens

The line thickness, and the corresponding colour coding, as specified in ISO 9178-3, shall be marked on the template.

Table — Symbol for lettering/draughting instrument

Symbol	Lettering/draughting instrument
	Tubular technical pen with stepped tube tip (see ISO 9175-1)
	Tubular technical pen with tube tip not stepped
	Fine-lead mechanical pencil, tubular guided
	Fine-lead mechanical pencil, lead guided
	Wood-cased pencil, clutch pencil
	Felt-tip/fibre-tip pen, tubular guided
	Felt-tip/fibre-tip pen, fibre-tip guided
	Ball-point pen

5.3 Nominal size

The nominal size shall be marked on templates for lettering and may be marked on templates for symbols.

The nominal size of lettering [lettering height, h (see ISO 3098-1)] is determined by the length of the vertical segment drawn between the outer limits of the top and bottom lines of a capital letter as shown in figure 1.

The nominal size for basic geometric figures (e.g. circles, squares, triangles) refers to a specific measurement, i.e. the distance between the middle points of the lines as shown in figures 2 and 3.

NOTE — The size of the slots in the template is calculated taking into consideration the lettering or draughting instrument to be used.

The nominal sizes of graphical symbols are laid down in other International Standards.

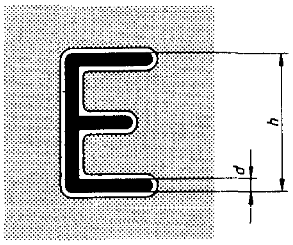


Figure 1

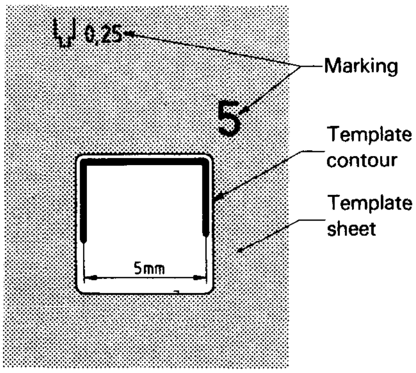


Figure 2

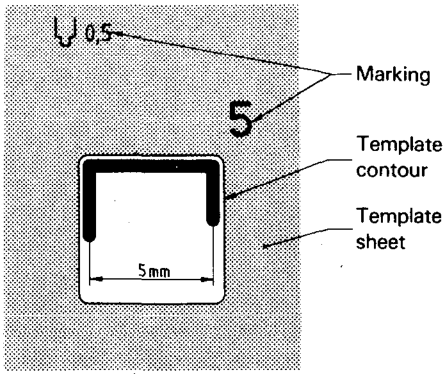


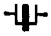
Figure 3

5.4 Examples of template identification markings

5.4.1 Example of an identification mark for a lettering template for lettering in accordance with ISO 3098-1*, type B (designated "B"), vertical (designated "v"), for tubular technical pens (see ISO 9175-1) with stepped tube tip, of 0,25 mm line thickness, for a lettering height of 2,5 mm:

ISO 3098-1 Bv **0,25 × 2,5**

5.4.2 Example of an identification mark for a symbol template for a fine-lead mechanical pencil, tubular guided, of 0,35 mm line thickness:

 **0,35**

6 Materials

The template sheet should be made of suitable transparent plastic (scratch resistant, dimensionally stable, non-brittle, etc.) of the manufacturer's choice.

---

* Lettering in accordance with ISO 3098-2, ISO 3098-3 or ISO 3098-4 shall be indicated in the same way.